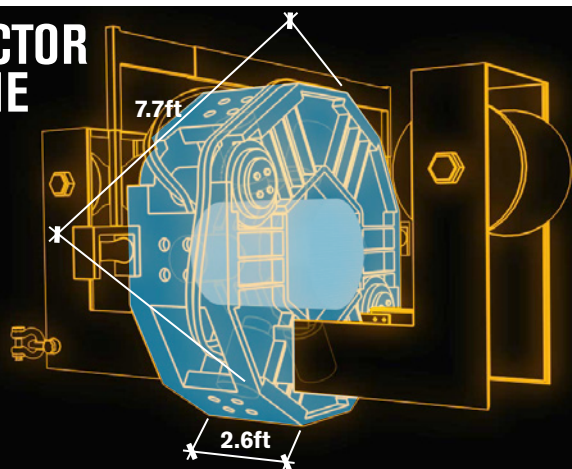




THE SELF-ANCHORED SUSPENSION SPAN (SAS) CABLE COMPACTION

COMPACTOR MACHINE



COMPRESSING THE STRANDS

Compaction is the second major step in the installation of the Self-Anchored Suspension Span's single main cable. The first was hauling the cable's 137 individual steel wire strands, which crews completed on April 5, 2012.

Four compactor machines have been working to compress the mile-long strands together with pressures up to 9,350 psi (pounds per square inch). Each steel compactor machine contains six hydraulic jacks and weighs 30,000 pounds. The hexagon-shaped compactors are 2.3 meters (7.7 feet) in diameter and .8 meters (2.6 feet) wide.

The compaction process begins at the top of the 525-foot-tall SAS tower with the machines moving 1.5 meters (4.9 feet) at a time. Once compressed to a precise diameter, temporary stainless steel seizing bands are then placed around the cable at 1.5 meter intervals to hold it in place. The strands are also compacted between the jacking and deviation saddles as the strands pass around the western end of the span. The cable is not compacted at the top of the tower as the individual strands pass through a cable saddle.

The custom-made compactors were designed by American Bridge/Fluor (a Joint Venture), the prime contractor building the SAS. The compactors were built by Jesse Engineering of Tacoma, Wash., with the jacks supplied by Enerpac of Menomonee Falls, Wis.

After compaction is completed, work will begin installing the 114 cable bands, which serve as anchor points for the suspender cables that will be installed later on the main cable.

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THE SELF-ANCHORED SUSPENSION SPAN (SAS)

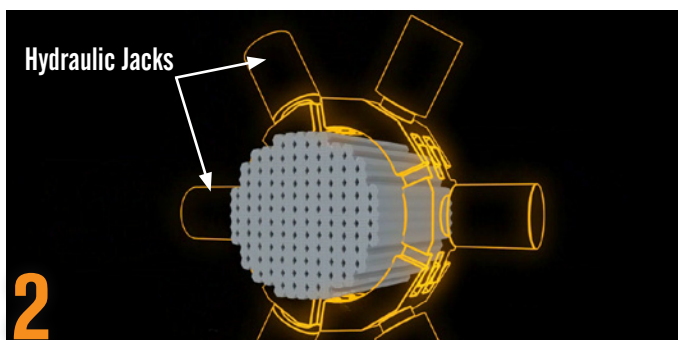
THE MAIN CABLE

...and how they'll complete it



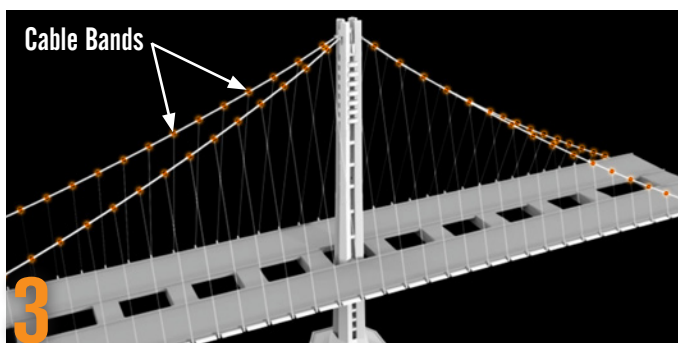
1 CABLE STRAND HAULING

Crews haul the 137 individual steel wire strands that comprise the nearly 1-mile long single main cable. The strands are adjusted and then anchored into the east end of the SAS.



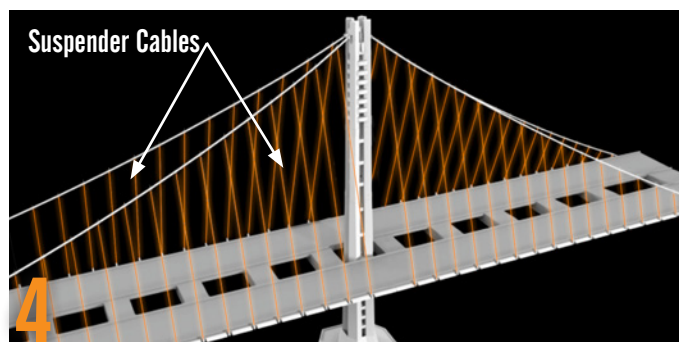
2 CABLE STRAND COMPACTING

Four compacting machines containing hydraulic jacks are used to compress the 137 steel wire strands into the shape of the main cable. Temporary bands are placed to maintain the shape.



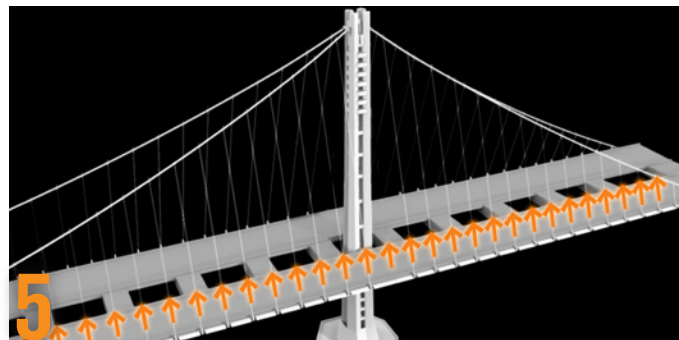
3 CABLE BANDS INSTALLED

Crews install 114 permanent steel cable bands along the main cable. These bands maintain the shape of the cable, and serve as anchor points for the suspender cables.



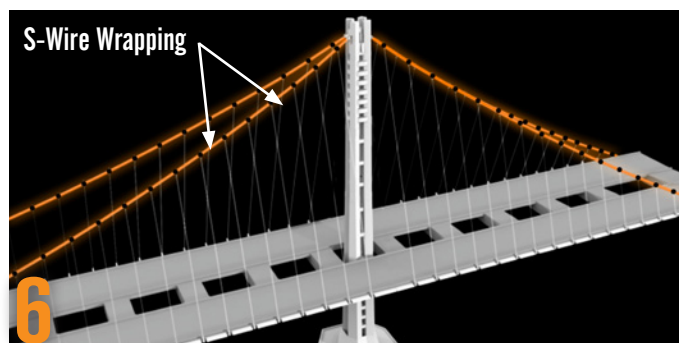
4 SUSPENDER CABLES INSTALLED

Workers begin placing the suspender cables that connect the main cable to the road-decks. Not all of the suspender cables need to be attached before load transfer begins.



5 LOAD TRANSFER

Using the attached suspender cables, crews begin the process of transferring the weight of the span from the temporary supports under the bridge to the main cable.



6 S-WIRE WRAP

After load transfer, the main cable is wrapped in S-wire to protect the cable against corrosion. After the cable is wrapped, it is painted.